obtaining the wasps, one of us (KVK) attempted to make a comprehensive collection of these flies during the trip. All specimens were taken on sand flats.

Metopia lateropili Allen (?). Everglades (1♀).

Metopia leucocephala (Rossi). Everglades (4 ♀♀, 3 ♂♂).

Phrosinella fulvicornis (Coq.). Arcadia (1♀).

Gymnoprosopa polita Tns. Miami (3♀♀).

Senotainia litoralis Allen. Marco (1♀), Arcadia (1♂).

Senotainia rubriventris Macq. Collier-Seminole State Park (1♀), Arcadia (8♀♀, 18♂♂).

Senotainia trilineata Wulp. Miami (3♂♂).

AN OUTLINE OF A RECLASSIFICATION OF THE EPHEMEROPTERA[1]

By George F. Edmunds, Jr.[2] and Jay R. Traver[3]

At the present time the writers have in preparation a more extended paper on the supragenerie classification of the Ephemeroptera. It will be some time before this manuscript will be completed, and in the meantime we have some papers in press in which the new classification will be used. Also some of our colleagues have urged us to make the classification available. Although hesitant to publish our new arrangement without explaining the reasons for our decisions, we find it desirable to do so under the present circumstances.

Until such time as a discussion of the origin and authorship of the family names can be given, and until some of the protested decisions of the Copenhagen Meetings of the International Commission of Zoological Nomenclature concerning family and superfamily names are clarified, we reluctantly omit the authors of family and superfamily names. We are, in accordance with the new rules, restoring the well-known family names Polymitarcidae (in place of Ephoridae or Ephoronidae) and Prosopistomatidae (for Binoculidae), the family names being based upon available subjective synonyms of the type genera. We are tentatively including as valid genera a few generic names of doubtful validity. The names *Proclocon* and *Pseudoclocon* of S. Matsumura (1931) are impossible to apply in the present state of our knowledge. Both names are homonyms of valid genera of Baetidae; they are referred to the family Ephemerellidae in Zoological Record.

[1]The publication of and research leading to this paper were supported by a grant from the University of Utah Research Fund.

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[3]University of Massachusetts, Amherst.

Superfamily **HEPTAGENIOIDEA** (= Siphlonuroidea, Baetoidea)

Family **Siphlonuridae**

Subfamily SIPHLONURINAE.—The following genera are included: *Ameletoides* Tillyard, *Ameletopsis* Phillips, *Ameletus* Eaton (= *Paleoameletus* Lestage, **new synonymy**), *Andromina* Navas, *Chiloporter* Lestage, *Chimura* Navas, *Dipteromimus* McLachlan (= *Dipteromimodes* Matsumura), *Edmundsius* Day, *Metamonius* Eaton, *Metreletus* Demoulin, *Metreturus* Burks, *Nesameletus* Tillyard, *Parameletus* Bengtsson (= *Potameis* Bengtsson, *Sparrea* Esben-Peterson, *Palmenia* (Aro, MS) Lestage, *Siphlonuroides* McDunnough), *Siphlonisca* Needham, *Siphlonurus* Eaton (= *Siphlurus* Eaton, *Siphlurella* Bengtsson), *Siphluriscus* Ulmer.

Subfamily ONISCIGASTRINAE, **new rank**.—The following genera are included: *Oniscigaster* McLachlan, *Siphloncila* Needham and Murphy, *Tasmanophlebia* Tillyard, *Tasmanophlebioides* Lestage.

Family **Isonychiidae, new rank**

Subfamily ISONYCHIINAE.—The following genera are included: *Coloburiseoides* Lestage, *Coloburiscus* Eaton (= *Coloburus* Eaton *nec* Dumeril), *Murphyella* Lestage (= *Dictyosiphlon* Lestage), *Isonychia* Eaton (= *Chirotonetes* Eaton, *Jolia* Eaton), *Mirawara* Harker.

Family **Oligoneuriidae**

Subfamily PSEUDOLIGONEURIINAE (= Chromarcyinae).—The following two genera are included: *Pseudoligoneuria* Ulmer, *Chromarcys* Navas.

Subfamily OLIGONEURIINAE.—The following genera are included: *Elassoneuria* Eaton, *Homoeoneuria* Eaton, *Lachlania* Hagen (= *Neophlebia* Navas *nec* Selys, *Noya* Navas, *Noyopsis* Navas, *Alloydia* Needham), *Oligoneuria* Pictet, *Oligoneuriella* Ulmer, *Oligoneuriopsis* Crass, *Oligoneurisca* Lestage, *Spaniophlebia* Eaton.

Family **Heptageniidae** (= Ecdyonuridae, Ecdyuridae, Arthropleidae)

Subfamily HEPTAGENIINAE.—The following genera are included: *Afronurus* Lestage, *Anepeorus* McDunnough, *Arthroplea* Bengtsson (= *Haplogenia* Blair, *Remipalpus* Bengtsson), *Atopopus* Eaton, *Bleptus* Eaton, *Cinygma* Eaton, *Cinygmina* Kimmins, *Cinygmula* McDunnough, *Compsoneuria* Eaton, *Compsoneuriella* Ulmer, *Ecdyonurus* Eaton (= *Ecdyurus* Eaton, *Cinygmoides* Matsumura), *Epeorella* Ulmer, *Epeorus* Eaton [with subgenera *Epeorus* Eaton, *Iron* Eaton, *Ironodes* Traver, *Ironopsis* Traver], *Heptagenia* Walsh (= *Kageronia* Matsumura), *Notonurus* Crass, *Ororotsia* Traver, *Paegniodes* Eaton, *Rhithrogena* Eaton, *Rhithrogeniella* Ulmer, *Stenonema* Traver, *Thalerosphyrus* Eaton.

Subfamily PSEUDIRONINAE, **new subfamily**.—Only a single genus is included: *Pseudiron* McDunnough.

Family **Ametropodidae** (= Siphloplectonidae)

Subfamily AMETROPODINAE.—A single genus is included: *Ametropus* Albarda.

Subfamily METRETOPODINAE.—The two following genera are included: *Metretopus* Eaton, *Siphloplecton* Clemens.

Family **Baetidae**

Subfamily BAETINAE.—The following genera are included: *Baetiella* Ueno, *Baetis* Leach (= *Heteroclocon* McDunnough, **new synonymy**; *Acentrella* Bengtsson, *Brachyphlebia* Westwood), *Baetodes* Needham and Murphy, *Callibaetis* Eaton, *Centroptiloides* Lestage (= *Haptobaetis* Navas), *Centroptilum* Eaton, *Clocodes* Traver, *Cloeon* Leach (= *Cloe* Burmeister, *Cloeopsis* Eaton, *Austrocloeon* Barnard), *Xcobaetis* Navas, *Xcocloeon* Traver, *Procloeon* Bengtsson (= *Pseudocloeon* Bengtsson *nec* Klapalek), *Pseudocloeon* Klapalek, *Pseudocentroptilum* Bogescо.

Superfamily **LEPTOPHLEBIOIDEA**, new superfamily

Family **Leptophlebiidae**

Subfamily LEPTOPHLEBIINAE.—The following genera are included: *Adenophlebia* Eaton (= *Esbenophlebia* Lestage), *Adenophlebiodes* Ulmer (= *Euphlebia* Crass), *Aprionyx* Barnard, *Atalonella* Needham and Murphy, *Atalomicria* Harker, *Atalophlebia* Eaton, *Atalophlebioides* Phillips, *Borinquena* Traver, *Calliarcys* Eaton, *Castanophlebia* Barnard, *Choroterpes* Eaton, *Choroterpides* Ulmer, *Cryptopenella* Gillies, *Deleatidium* Eaton, *Dipterophlebiodes* Demoulin, *Euthraulus* Barnard, *Fulleta* Navas, *Habroleptoides* Schoenemund, *Habrophlebia* Eaton, *Habrophlebiodes* Ulmer, *Hagenulodes* Ulmer, *Hagenulopsis* Ulmer, *Hagenulus* Eaton, *Hermanella* Needham and Murphy, *Isca* Gillies, *Jappa* Harker, *Kirrara* Harker, *Leptophlebia* Westwood [with subgenera *Leptophlebia* Westwood (= *Euphyurus* Bengtsson), *Blasturus* Eaton], *Massartella* Lestage, *Neohagenulus* Traver, *Nousia* Navas, *Paraleptophlebia* Lestage, *Simothraulus* Ulmer, *Thraulodes* Ulmer, *Thraululus* Ulmer, *Thraulus* Eaton, *Traverella* Edmunds.

Family **Ephemerellidae**

Subfamily EPHEMERELLINAE.—The following genera are included: *Ephemerella* Walsh [with subgenera *Eurylophella* Tiensuu (? = *Melanameletus* Tiensuu), *Chitonophora* Bengtsson, *Drunella* Needham (= *Eatonella* Needham), *Ephemerella* Walsh, *Timpanoga* Needham, *Torleya* Lestage], *Ephemerellina* Lestage, *Lithogloca* Barnard, *Melanemerella* Ulmer, *Teloganella* Ulmer, *Teloganodes* Eaton, *Teloganopsis* Ulmer.

Family **Tricorythidae**

Subfamily TRICORYTHINAE.—The following two genera are included here: *Tricorythus* Eaton (= *Tricorythurus* Lestage), *Neurocaenis* Navas.

Subfamily LEPTOHYPHINAE, **new subfamily**.—The following genera are included: *Bruchella* Navas, *Leptohyphes* Eaton, *Leptohyphodes* Ulmer, *Tricorythafer* Lestage (= *Caenopsis* Needham *nec* Bach, *Needhamocoenis* Lestage), *Tricorythodes* Ulmer.

Subfamily DICERCOMYZINAE, **new subfamily**.—A single genus is included: *Dicercomyzon* Demoulin.

Superfamily **CAENOIDEA**

Family **Caenidae**

Subfamily CAENINAE.—The following genera are included: *Austrocaenis* Barnard, *Brachycercus* Curtis (= *Oxycypha* Burmeister, *Eurycaenis* Bengtsson), *Caenis* Stephens (= *Ordella* Campion), *Caenodes* Ulmer, *Tasmanocoenis* Lestage.

Family **Neoephemeridae**

Subfamily NEOEPHEMERINAE.—The following two genera are included: *Neoephemera* McDunnough (= *Oreianthus* Traver), *Neoephemeropsis* Ulmer.

Superfamily **EPHEMEROIDEA**

Family **Behningiidae**

Subfamily BEHNINGIINAE.—A single genus is included: *Behningia* Lestage.

Family **Potamanthidae**

Subfamily POTAMANTHINAE.—The following genera are included: *Leucorhoenanthus* Lestage, *Neopotamanthodes* Hsu, *Potamanthellus* Lestage (= *Rhoenanthodes* Lestage), *Potamanthindus* Lestage, *Potamanthodes* Ulmer, *Potamanthus* Pictet, *Rhoenanthopsis* Ulmer, *Rhoenanthus* Eaton.

Family **Euthyplociidae, new rank**

Subfamily EUTHYPLOCIINAE.—The following genera are included: *Afroplocia* Lestage, *Campylocia* Needham and Murphy (= *Longinella* Gros and Lestage), *Euthyplocia* Eaton, *Exeuthyplocia* Lestage, *Mesoplocia* Demoulin, *Polyplocia* Lestage.

Family **Ephemeridae**

Subfamily EPHEMERINAE.—The following genera are included: *Eatonica* Navas, *Eatonigenia* Ulmer, *Ephemera* Linnaeus (= *Nirvius* Navas), *Hexagenia* Walsh [with subgenera *Hexagenia* Walsh, *Pseudeatonica* Spieth], *Ichthybotus* Eaton, *Pentagenia* Walsh.

Family **Polymitarcidae** (= Ephoridae, Ephoronidae)

Subfamily POLYMITARCINAE.—A single genus is included: *Ephoron* Williamson (= Eopolymitarcys Tshernova, **new synonymy**; *Polymitarcys* Eaton).

Subfamily CAMPSURINAE.—The following two genera are included: *Campsurus* Eaton, *Tortopus* Needham and Murphy.

Subfamily ASTHENOPODINAE, **new subfamily** (type, *Asthenopus*).—The following genera are included: *Asthenopodes* Ulmer, *Asthenopus* Eaton, *Povilla* Navas.

Family **Palingeniidae**

Subfamily PALINGENIINAE.—The following genera are included: *Ana-*

genesia Eaton, *Chankagensia* Buldovskii (= *Chankgenesia* Buldovskii), *Cheirogenesia* Demoulin, *Mortogenesia* Lestage, *Palingenia* Burmeister, *Plethogenesia* Ulmer (= *Tritogenesia* Lestage).

Superfamily **PROSOPISTOMATOIDEA, new rank** (= Baetiscoidea)

Family **Baetiscidae**

Subfamily BAETISCINAE.—A single genus is included here: *Baetisca* Walsh.

Family **Prosopistomatidae** (= Binoculidae)

Subfamily PROSOPISTOMATINAE.—A single genus is included here: *Binoculus* Geoffroy (= *Prosopistoma* Latreille, *Chelysentomon* Joly and Joly).

TWO NEW CHIGGERS FROM THE CENTRAL STATES

(ACARINA, TROMBICULIDAE)[1, 2]

BY D. A. CROSSLEY, JR. and LOUIS J. LIPOVSKY, *University of Kansas, Lawrence*

Investigations at the University of Kansas have disclosed two new species of chiggers belonging to the genus *Euschöngastia*. Both were taken from mammals inhabiting the short-grass prairies and canyons of the high plains region in the central states. These are summer chiggers and are known only from limited localities, as listed. Both species have been reared by one of us (Lipovsky) to the nymphal stage; descriptions of the nymphs will be published elsewhere.

In the following descriptions the terminology used is that of Wharton *et al.*, 1951. All measurements are in microns. Descriptions are based on the holotypes, with variations in the paratypes noted.

Euschöngastia cynomyicola, new species

(Figs. 1-5)

Diagnosis.—A *Euschöngastia* characterized as a larva by a trifurcate palpal claw, galeal seta with four or five branches, sensillae obovoid, two genualae I, subterminala and parasubterminala I present, tibiala III present, ventral setal formula beginning 2-6.

Body.—Shape almost spherical when engorged. Color in life, white. Length and width of body of holotype 369 by 341 (engorged). Eyes, two on each side; posterior eye smaller and situated on a plate apparently independently of anterior eye; distance across both eyes of one side 18, in holotype.

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[2]Contribution No. 865 of the Department of Entomology, University of Kansas.